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- one of the first magnetic structures comprises magnetic material that is not a magnet located laterally adjacent to the first axially magnetized magnet;
- one of the second magnetic structures comprises
 - a second axially magnetized magnet having its magnetic 5 axis oriented perpendicular to the second connector mating interface; and
- one of the second magnetic structures comprises magnetic material that is not a magnet located laterally adjacent to the second axially magnetized magnet;
- wherein as the first connector mating interface approaches the second connector mating interface:
 - the first axially magnetized magnet is attracted to the second magnetic structure comprising magnetic material that is not a magnet;
 - the first axially magnetized magnet is repelled from the second axially magnetized magnet; and
 - the second axially magnetized magnet is attracted to the first magnetic structure comprising magnetic material that is not a magnet.
- 13. The electrical connector system of claim 1 wherein the magnetic flux density through the second electrical contacts is higher than the magnetic flux density through the space between adjacent second electrical contacts.
- 14. The electrical connector system of claim 1 wherein the 25 connector system provides electrical continuity through a wall of a case for an electronic device.
- 15. The electrical connector system of claim 1 wherein the plurality of first electrical contacts or the plurality of second electrical contacts at least partially define a portion of a letter 30 or logo.
- 16. The electrical connector system of claim 1 wherein the one or more second magnetic structures comprise magnetic

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material that is not a permanent magnet and wherein the smallest distance from a second electrical contact to a second magnetic structure is less than the smallest distance from the second electrical contact to the compliant substrate.

- 17. The electrical connector system of claim 16 wherein the compliant substrate comprises an aperture and wherein a portion of a second magnetic structure extends through the aperture.
- 18. The electrical connector system of claim 1 wherein the first magnetic structure comprises
 - an axially polarized magnet having a first magnetic pole face and a second magnetic pole face wherein the flux path inside the magnet between the first and second magnetic pole faces is substantially parallel to the first connector mating interface; and
 - a first ferromagnetic pole piece proximate to the first magnetic pole face; and
 - a second ferromagnetic pole piece proximate to the second magnetic pole face.
- 19. The electrical connector system of claim 18 characterized by a magnetic flux circuit wherein the magnetic flux circuit comprises a path through the first magnetic pole face, the first ferromagnetic pole piece, a first electrical contact, a second electrical contact, a second magnetic structure, the second ferromagnetic pole piece and the second magnetic pole face.
- 20. The electrical connector system of claim 18 comprising an electronic substrate wherein a portion of the electronic substrate is positioned between the first magnetic pole face and the first ferromagnetic pole piece.

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